



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,033	04/01/2004	Hans-Joachim Beyer	7545	9259
7590	08/11/2004		EXAMINER	
Attn: Arlene J. Powers Gauthier & Connors, LLP Suite 3300 225 Franklin Street Boston, MA 02110			COOLEY, CHARLES E	
			ART UNIT	PAPER NUMBER
			1723	
			DATE MAILED: 08/11/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/816,033	BEYER ET AL.
	Examiner	Art Unit
	Charles E. Cooley	1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-21 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-21 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 01 April 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>04012004</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: ____.

OFFICE ACTION

1. This application has been assigned to Technology Center 1700, Art Unit 1723

and the following will apply for this application:

Please direct all written correspondence with the correct application serial number for this application to Art Unit 1723.

Telephone inquiries regarding this application should be directed to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 or to the Examiner at (571) 272-1139. All official facsimile should be transmitted to (703) 872-9306.

2. As the PTO continues to move towards a fully electronic environment, the office will phase-in its E-Patent Reference program. This program: (1) provides downloading capability of the U.S. patents and U.S. patent application publications cited in Office actions via the E-Patent Reference feature of the Office's PAIR system; and (2) ceases mailing paper copies of U.S. patents and U.S. patent application publications with office actions except for citations made during the international stage of an international application under PCT.

Effective June 2004, paper copies of cited U.S. patents and U.S. patent application publications will cease to be mailed to applicants with Office actions from this Technology Center. Paper copies of foreign patents and non-patent literature will continue to be included with office actions.

The U.S. patents and patent application publications cited in office actions are available for download via the Office's PAIR system. As an alternate source, all U.S.

patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Inquiries about the use of the Office's PAIR system should be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

Requests to restart a period for response due to a missing U.S. patent or patent application publications will not be granted.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119, which papers have been placed of record in the file.

Information Disclosure Statement

4. Note the attached PTO-1449 form submitted with the Information Disclosure Statement filed 1 APR 2004.

Drawings

5. The drawings are objected to because of the following informalities:
 - a. see the attached PTO-948 form.
 - b. Figures 6-7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Correction is required.

6. Applicant should verify that (1) all reference characters in the drawings are described in the detailed description portion of the specification and (2) all reference characters mentioned in the specification are included in the appropriate drawing Figure(s) as required by 37 CFR 1.84(p)(5).

7. Applicant is required to submit the drawing changes on replacement sheets as outlined below:

37 CFR 1.121 (d) requires that any drawing changes be submitted in compliance with 37 CFR 1.84 on replacement sheets as an attachment to an amendment document. An accompanying detailed explanation of all of the changes should be provided on a separate sheet in the drawing amendments or remarks section of the amendment document. A marked-up copy of one or more of the figures being amended, with annotations, may also be included to provide further explanation of the changes made. The marked-up version must be labeled as "Annotated marked-up Drawings." Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per Sec. 1.84(c)) so as not to

Art Unit: 1723

obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. No further drawing submission of the amended drawing figure(s) by applicant would be required, unless applicant is so notified.

Specification

8. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

9. The disclosure is objected to because of the following informalities:

a. the references to the features of particular claims throughout the specification are improper (e.g., see page 2, lines 6-7) because the specification should positively recite the features of the claims rather than inferentially referring to subject matter of a particular claim through incorporation by reference thereto.

Appropriate correction is required.

10. The abstract is acceptable.

11. The title is acceptable.

Claim Rejections - 35 U.S.C. § 112, second paragraph

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16, line 2: "the stationary scraper disk" lacks antecedent basis.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-6, 8-10, 14-15, and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Probstmeyer (US 3,854,658).

The patent to Probstmeyer discloses the recited solid bowl helical conveyor centrifuge in Fig. 1 including a rotating drum 10 which includes a centrifuge space Q with a rotatable screw 22, 22a; an inlet tube 39 for supplying a material for centrifugation into the centrifuge space; at least one liquid discharge 17 and at least one solids discharge 20; wherein the liquid discharge 17 and/or the solid discharge 20 having at least one or more openings in a rotating part of the solid bowl helical conveyor centrifuge, in particular through openings 17, 20 in the drum wall (Fig. 1); the openings 17 and 20 being each covered by a housing 37, 38 respectively which encloses the

drum 10 of the solid bowl helical conveyor centrifuge in only some sections; between the housings 37, 38 and the drum and/or other rotating elements of the solid bowl helical conveyor centrifuge at least one or more rubber gaskets are provided as seen in Fig. 1 and as denoted by the drawing symbol for rubber per MPEP 608.02; the gaskets are bearing ring/annular gaskets (Fig. 1); the openings 17 being located in an axial end face 16, 18 of the drum wall; the openings 20 being located in the circumferential wall of the drum and point radially outward; the housings 37, 38 extending over the area of the openings 17, 20 on the drum; the housing 37 is designed with a step (to the right of 22a) and extends over a step (proximate 16) of the drum; the housings 37, 38 being stationary (col. 3, lines 54-55 and lines 63-64); the openings 20 being for solids discharge in a tapered section of the drum 10; the openings 17 being for liquid discharge in the form of an overflow opening in the end face 16, 18 of the drum facing away from the solids discharge 20, whereby these overflow openings 17 are covered by one of the housings 37; wherein one of the gaskets is in contact with an axial end face 16a of the drum and another of the gaskets is in contact with a cylindrical drum head (proximate 16).

16. Claims 1-7, 9-10, 14, and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Hopfe (US 3,880,346).

The patent to Hopfe discloses the recited solid bowl helical conveyor centrifuge in Fig. 1 including a rotating drum 10 which includes a centrifuge space with a rotatable screw 17; an inlet tube 21 for supplying a material for centrifugation into the centrifuge space; at least one liquid discharge 10' and at least one solids discharge 27; wherein

the liquid discharge 10' and/or the solid discharge 27 having at least one or more openings in a rotating part of the solid bowl helical conveyor centrifuge, in particular through openings 10', 27 in the drum wall (Fig. 1); the openings 10' and 27 being each covered by a housing section 29, 30 and 28, 30 respectively which encloses the drum 10 of the solid bowl helical conveyor centrifuge in only some sections; between the housings and the drum and/or other rotating elements of the solid bowl helical conveyor centrifuge at least one or more rubber gaskets 33 are provided; the gaskets are bearing ring/annular gaskets (Fig. 1); the openings 10' being located in an axial end face 10a of the drum wall; the openings 27 being located in the circumferential wall of the drum and point radially outward; the housings extending over the area of the openings 10', 27 on the drum; the housings being stationary; the openings 27 being for solids discharge in a tapered section of the drum 10; the openings 10' being for liquid discharge in the form of an overflow opening in the end face 10a of the drum facing away from the solids discharge 27, whereby these overflow openings are covered by one of the housings 29, 30; wherein the gasket 33 is arranged between the inside circumference of the axial wall 30 of the housing and that of the drum 10.

* * *

With regard to the above rejections, the operational and functional language of the claims (e.g., the language of claim 17, 18, 19, claim 20, lines 9-10, and claim 21, lines 9-10) has been considered but fails to impart or invoke any further structure or means (per 35 USC 112, sixth paragraph and MPEP 2181) to the pending apparatus claims which defines over the applied prior art. The pending apparatus claims lack any

structure to generate a pressurized housing within the recited pressure range or to generate the recited temperature and the examiner considers that one skilled in the art would readily recognize that the housings of the applied prior art are indeed capable of being pressurized or having the temperature thereof modified (as recognized by Scherer (US 4,708,711) at col. 5, line 55 through col. 6, line 11). The recited speed of the gaskets is but an operational characteristic of the centrifuge and fails to further define structure of the centrifuge. Consequently, since all of the claimed structure is met by the applied prior art, the rejections under 35 USC 102 are deemed proper.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Probstmeyer (US 3,854,658) or Hopfe (US 3,880,346) in view of EP 640398 A2.

Probstmeyer (US 3,854,658) or Hopfe (US 3,880,346) do not disclose the recited scraper disk. EP 640398 A2 discloses a solid bowl helical conveyor centrifuge (Fig. 1) with a solids discharge 13 and a liquid discharge in the form of a scraper disk 15, 16 (Fig. 2). The scraper disk 15, 16 is arranged in a chamber of the drum, adjacent to the centrifuge space and the chamber is connected to the drum by at least one opening as seen in Fig. 1. It would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have provided the centrifuges of Probstmeyer (US 3,854,658) or Hopfe (US 3,880,346) with a liquid discharge in the form of a scraper disk as disclosed by EP 640398 A2 for the purpose of controlling the liquid discharge rate for the centrifuge and to reduce the formation of foam (per the abstract).

Allowable Subject Matter

20. Claims 16 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112 and to include all of the limitations of the base claim and any intervening claims since the prior art of record does not teach or fairly suggest the recited location of the gasket.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited prior art shows housing structure for solid bowl helical conveyor centrifuges.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Charles E. Cooley
Primary Examiner
Art Unit 1723